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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,115	12/06/2001	Hiroyuki Asako	7372-72249	3895

22242 7590 07/25/2003

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CHICAGO, IL 60603-3406

EXAMINER
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SLOBODYANSKY, ELIZABETH

ART UNIT	PAPER NUMBER
1652	

DATE MAILED: 07/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/004,115	ASAKO ET AL.
	Examiner Elizabeth Slobodyansky	Art Unit 1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) 1-38 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

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## DETAILED ACTION

Claims 1-38 are pending.

### *Election/Restriction*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14, drawn to a DNA encoding an enzyme of SEQ ID NO: 1, a vector containing it, a transformant containing thereof, a method of making a transformant, classified in class 435, subclass 252.3.
- II. Claim 15, drawn to an enzyme of SEQ ID NO: 1, classified in class 435, subclass 189.
- III. Claims 16-20, drawn to a method for producing (S)-4-halo-3-hydroxybutanoate using an enzyme of SEQ ID NO: 1, classified in class 435, subclass 136.
- IV. Claims 21-23, drawn to a method for producing an optically active 3-hydroxybutanoic acid ester using a microorganism, classified in class 435, subclass 280.
- V. Claim 24, drawn to a method for producing an optically active 4-bromo-3-oxobutanoate using an enzyme of SEQ ID NO: 34, classified in class 435, subclass 136.

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VI. Claims 25-30, drawn to a method for producing 4-cyano-3-hydroxybutanoic acid using a metal cyanide, classified in class 560, subclass 23.

VII. Claims 31-38, drawn to a method for producing (R)-4-cyano-3-hydroxybutanoic acid using a microorganism, classified in class 435, subclass 41.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are patentably distinct because a DNA and an enzyme are different compounds each with its own chemical structure and function, and they have different utilities. A DNA molecule of invention I can be used for the production of an enzyme of invention II and as a hybridization probe, for example. An enzyme of invention II can be obtained by a materially different method such as by the biochemical purification and it can be used for the production of an antibody, for example.

Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process can

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be practiced with a structurally different enzyme having the requisite activity and enzyme having the amino acid sequence of SEQ ID NO:1 can be used for the production of antibodies, for example.

Inventions of Groups III-VII are drawn to materially different processes for producing different compounds, using different products and having different steps. Methods of Groups III, V are using enzymes, methods of Groups IV, VII and IV are using microorganisms and a method of Group VI is using a metal cyanide. Enzymes and metal cyanide are unrelated chemical compounds with different structures and functions and they have different effects. While enzymes and metal cyanide are single chemical compounds, microorganisms are complex entities comprising a great number of different compounds acting in accord. Methods of Groups III and V are patentably distinct as using enzymes of different structures and activities (SEQ ID NO:1 and SEQ ID NO:34). Methods of Groups IV and VII are patentably distinct as producing different compounds such as an ester and an acid, said methods comprising different steps and using different products.

A telephone call was made to Mr. Kendrew Colton on July 15, 2003 to request an oral election to the above restriction requirement, but did not result in an election being made.

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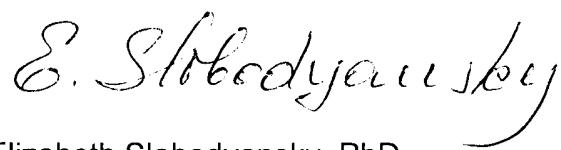
Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is rendered that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Slobodyansky whose telephone number is (703) 306-3222. The examiner can normally be reached Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy, can be reached at (703) 308-3804. The FAX phone number for Technology Center 1600 is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Center receptionist whose telephone number is (703) 308-0196.



Elizabeth Slobodyansky, PhD  
Primary Examiner

July 15, 2003